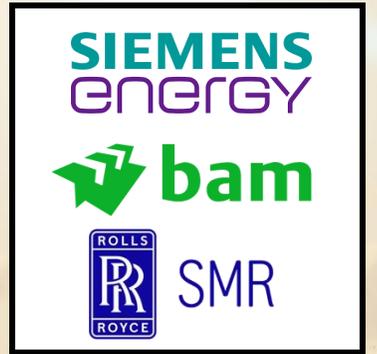


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Clean Steel Clusters Powered by SMRs

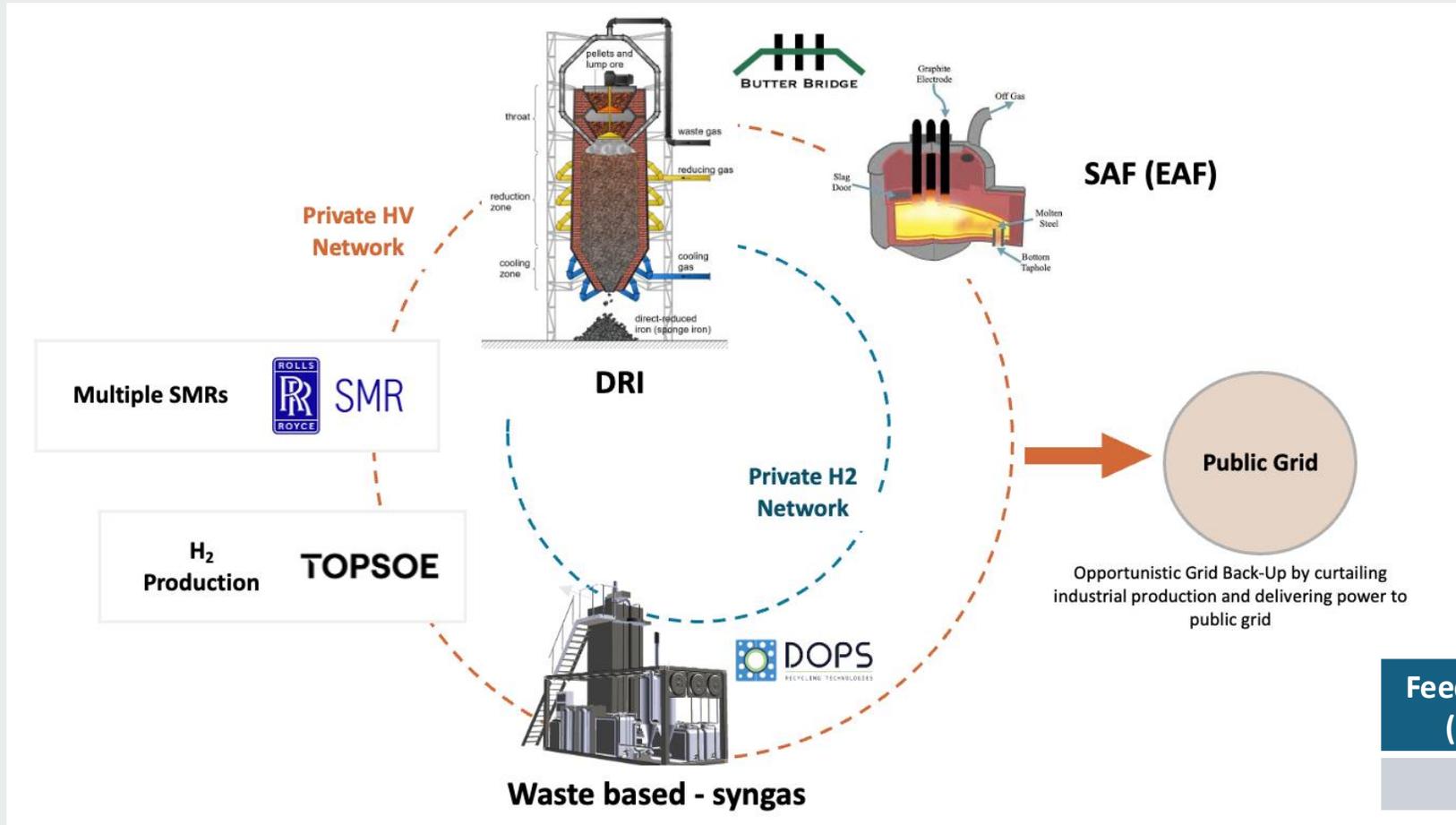


ULC-Energy Partners

A realistic solution for clean steel production in Europe

- Clean steel production plans are hampered by an unrealistic energy solutions
 - Variable power from renewables
 - Expensive, challenging, carbon capture projects
 - Uneconomic grid fees
- A lack of real projects
- Continuous changes in scope
- Real risk of permanent closures
- Affordable on-site industrial scale electricity and heat
- Pairing with clean tech solutions
 - H2 electrolysis (incl. SOEC)
 - Waste gasification
 - Slag reprocessing
- Standard modular complete nuclear power plant
 - Proven technology and fuel
 - Established supply chains
- Larger units to preserve economies of scale

SMR-powered Clean Steel Cluster



- Connection and **power is guaranteed** by multiple SMRs.
- NPV of grid tariff savings **>€3 billion** in network tariffs
- Integrated energy and utility solution ensures **site optimization** and operational continuity
- Cluster demand flex can be **opportunistically monetized** via grid sales

Feedstock (mt)	Gassification (MW)	SAF (MW)	DRI (mt)
~2	~300	~140	~1.5

Clean hydrogen from nuclear energy

TECHNOLOGY PROVIDERS

TOPSOE



ROLLS ROYCE SMR



DEVELOPER & PROJECT COORDINATOR

ULC Energy

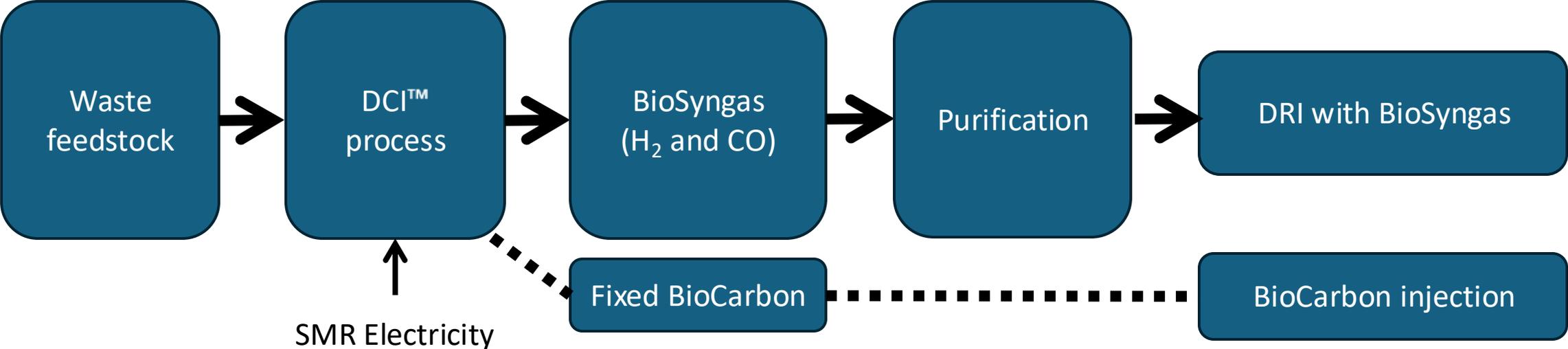
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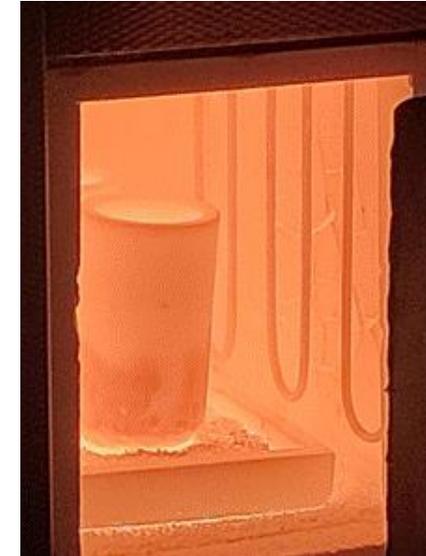
- ULC-Energy led a study to assess the cost of clean hydrogen production using steam and electricity from an SMR paired with SOEC*.
- A 470MWe Rolls-Royce SMR with a 400MW SOEC system can produce **>85,000 tonnes** of hydrogen annually.
- The system is ~20-30% more efficient than conventional Alkaline or PEM technology and can **produce 24/7**, using both electricity and heat from the SMR.

*: Solid Oxide Electrolysis Cell

DOPS: Leveraging the Value of Molecules



Butter Bridge: Smart Integrated Metallurgy



- 100 yr experience in steel, alloys, electric smelting, energy, trade
- FeNi furnaces, open bath smelting, blast furnaces
- Start-up → build a pyro test facility₆

- Consultancy Services
- Mining & OEMs,
 - Steel, Alloys
 - Sub Suppliers,
 - Cement Industry

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